EFFICACY OF STRUCTURED TEACHING PROGRAMME ON BUERGER ALLEN EXERCISE IN TERMS OF KNOWLEDGE AND PRACTICE TO PREVENT VARICOSE VEINS AMONG WORKERS IN SELECTED GARMENT FACTORY, ERODE

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ABSTRACT:

This study was under taken to assess the "efficacy of structured teaching program on Buerger Allen Exercise in terms of knowledge and practice to prevent varicose veins among workers in selected Garment factory, Erode, Tamil Nadu". Pre experimental one group pretest - posttest design. The data was collected over a period of 6 months among 500 workers working mainly in Ironing and Packing session in Garment Factory, Erode, Tamil Nādu.

Simple random sampling with lottery method. After a pre-test, structured teaching programme on Buerger Allen exercise with demonstration was administered to the factory workers. On 8th day post-test knowledge and practice was assessed using questionnaire and assessment scale. In pre-test mean knowledge score was 11.00 and standard deviation (+4.52) whereas in post-test mean score was 19.84 and standard deviation (+3.56) and the paired 't' calculated value was 31.21, which was greater than table value (3.34) at p<0.001 level. In pre- test practice, majority of them 200(40%) had Moderate scores, 150 (30%) had severe, 100(20%) had mild and 50(10%) had normal practice scores before practicing Buerger Allen Exercise. Whereas in post-test, majority of them 294 (59.2%) had normal, 149 (29.8%) had mild, 51(10.2%) had moderate and 4(0.8%) had severe varicose veins after practicing buerger Allen exercises.

Key words: *Varicose veins, Buerger Allen Exercise, Structured Teaching Programme.*

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INTRODUCTION:

“It is the health that is the real wealth and not pieces of gold or silver”

-Mahatma Gandhi

Varicose veins are permanently distended veins that develop from the loss of valvular competence. Faulty valves elevate venous pressure causing distension and tortuosity of the superficial veins. The greater and lesser saphenous veins and perforator veins in the ankle are common sites of Varicosities (Brunner 2005).

Peripheral vascular disease (PVD) is a slow and progressive circulation disorder. It may involve disease in any of the blood vessels outside of the heart and the lymph vessels. The blood supplied by the vessels to the brain, heart, and legs, may not receive adequate blood flow for ordinary function. However the legs and feet are most commonly affected parts, thus its name as “peripheral vascular disease”. Conditions associated with peripheral vascular diseases that affect the veins have higher incidence (20%) more than other disease like deep vein thrombosis (DVT) (17%), varicose veins (20%), and chronic venous insufficiency (10%) (Black, J.M., & Hawks, J.H. 2005).

Buerger-Allen exercise - Specific exercises intended to improve circulation to the feet and legs. The lower extremities are elevated to a 45-to-90-degree angle and supported in this position until the skin blanches (appears dead white). The feet and legs are then lowered below the level of the rest of the body until redness appears (care should be taken that there is no pressure against the back of the knees); finally, the legs are placed flat on the bed for a few minutes. The length of time for each position varies with the patient's tolerance and the speed with which color change occurs. Usually the exercises are prescribed so that the legs are elevated for 2 to 3 minutes, down 5 to 10 minutes and then flat on the bed for 10 minutes.

The conceptual framework set up for the study was modified model of Stuffle Beam’s evaluation model of planned program. Stuffle Beam’s “CIPP model” prescribes four areas of evaluation, context, input, process and product. It provides a comprehensive, systematic and continuously ongoing framework for program evaluation.

MATERIALS AND METHODS:

A quantitative research approach was used for the study. The investigator selected pre-experimental one group pretest - posttest design. The data was collected over a period of 6 months among 500 workers working mainly in Ironing and Packing session in Garment Factory, Erode, Tamilnadu. Samples were selected using simple random sampling with lottery method. After a pre-test, structured teaching programme on Buerger Allen exercise with demonstration was administered to the factory workers. On 8thday post-test knowledge and practice will be assessed using questionnaire and assessment scale. The pre test and post test data were collected by using structured knowledge questionnaire on prevention of varicose vein and a practice assessment scale. The descriptive and inferential statistical methods were used to compute the data.

RESULTS:

Table.1: **Frequency and percentage distribution of socio demographic variables among workers.**

S.No.	Demographic variables	F	%
1.	**Age(in years)**		
	a. 30-35	150	30%
	b. 36-45	200	40%
	c. 46-50	150	30%
2.	**Educational Qualification**		
	a. No formal education	100	20%
	b. Primary education	100	20%
	c. Secondary education	100	20%
	d. Higher Secondary	100	20%
	e. Graduate	100	20%
3.	**Monthly Income (in Rs)**		
	a. < 5000	100	20%
	b. 5001-10000	300	60%
	c. >10000	100	20%
4.	**Type of family**		
	a. Joined family	150	30%
	b. Nuclear family	350	70%

S.No.	Demographic variables	F	%
5.	**Type of diet**		
	a. Vegetarian	150	30%
	b. Non –Vegetarian	350	70%
6.	**Bad Habits**		
	a. Alcoholism	100	20%
	b. Tobacco use	50	10%
	c. Smoking	100	20%
	d. No bad habits	250	50%
7.	**Type of Work**		
	a. Sedentary work	100	20%
	b. Moderate work	200	40%
	c. Heavy work	200	40%
8.	**Duration of Work/day**		
	a. 5-6 hrs/day	100	20%
	b. 7-8 hrs/day	200	40%
	c. 9-10 hrs/day	200	40%
9.	**From whom you have received the general information about health**		
	a. Health care personnel	100	20%
	b. Newspaper/TV	300	60%
	c. Relatives/friends	50	10%
	d. None	50	10%
10	**Is any of your family member affected with Varicose vein?**		
	a. Yes	200	40%
	b. No	300	60%

Table 2: Distribution of pre-test and posttest levels of Knowledge regarding Buerger Allen exercise to prevent varicose veins among workers

KNOWLEDGE LEVELS		**PRE -TEST**		**POST- TEST**	
		F	**%**	**F**	**%**
Inadequate knowledge	0-33.3%	350	70%	10	2%
Moderately adequate knowledge	33.4-66.6%	100	20%	196	39.2%
Adequate knowledge	66.6-100%	50	10%	294	58.8%
Total		**500**	**100**	**500**	**100**

Table 3: Distribution of pre-test and posttest practice scores regarding Buerger Allen exercise to prevent varicose veins among workers

PRACTICE SCORES	**PRE- TEST**		**POST -TEST**	
	F	**%**	**F**	**%**
Normal (0)	50	10%	296	59.2%
Mild (1)	100	20%	149	29.8%
Moderate (2)	200	40%	51	10.2%
Severe(3)	150	30%	4	0.8%
Total	**500**	**100%**	**500**	**100%**

Table 4: Efficacy of structured teaching programme on Buerger Allen exercise in terms of knowledge to prevent varicose veins among workers N=500

Knowledge levels	Mean	Standard deviation	't' calculated value	't' Table value	Significance
Pre – test	11.00	4.52	**31.21**	**3.34**	**S****
Post - test	19.84	3.56			

Table 5: Efficacy of structured teaching programme on Buerger Allen exercise in terms of practice scores to prevent varicose veins among workers

Practice	Mean	Standard deviation	't' calculated value	't' Table value	Significance
Pre - test	1.94	0.94	**25.01**	**3.34**	**S***
Post - test	0.52	0.71			

Table 6: **Assessment of relationship between knowledge levels and practice scores on Buerger Allen exercise in terms of prevention of varicose veins among workers**

S.No	Pain Perception Scales	Correlations between experimental and control groups	
		'r' value	'P' value
1.	**Pretest**	**-0.492****	**0.00001**
1.a.	**Post test**	**-0.121****	**0.0064**

DISCUSSION:

The discussion of the present study is based on findings obtained from descriptive and inferential statistical analysis of collected data. This study was under taken to assess the "efficacy of structured teaching program on Buerger Allen Exercise in terms of knowledge and practice to prevent varicose veins among workers in selected Garment factory, Erode, Tamil Nadu. "In pre- test knowledge, majority of them 350(70%) had Inadequate knowledge, 100 (20%) had Moderately adequate knowledge and 50(10%) had adequate knowledge. Whereas in post- test knowledge, majority of them 294 (58.8%) had adequate knowledge, 196 (39.2%) had moderately adequate knowledge and 10(2%) had inadequate knowledge. In pre- test practice scores majority of them 200(40%) had Moderate scores, 150 (30%) had severe, 100(20%) had mild and 50(10%) had normal practice scores before practicing Buerger Allen Exercise. Whereas in post- test, majority of them 294 (59.2%) had normal, 149 (29.8%) had mild, 51(10.2%) had moderate and 4(0.8%) had severe varicose veins after practicing buerger Allen exercises.

CONCLUSION:

The result proves that there was a very highly significant difference between pre -test and post- test knowledge & practice levels at p<0.001. It indicates that structured teaching program on buerger allen exercise was very effective. Hence the buerger allen exercise was an effective intervention in order to prevent varicose veins for long standing workers.

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